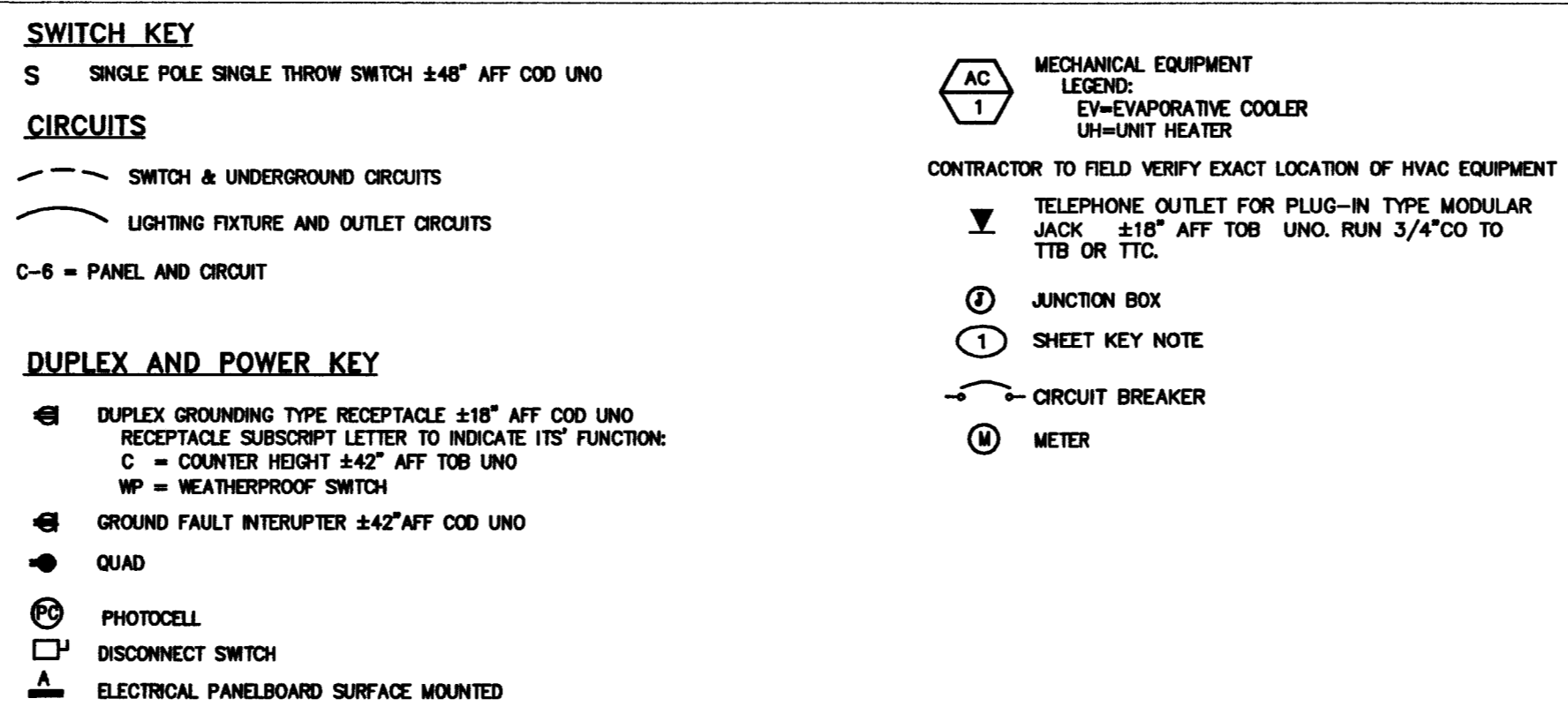


ELECTRICAL GENERAL NOTES

- THE DRAWINGS REPRESENT THE FINISHED PROJECT UNLESS OTHERWISE NOTED. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND SEQUENCES.
- ALL DIMENSIONS, EXISTING JOB SITE CONDITIONS, AND SERVICE REQUIREMENTS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
- CONTRACTOR SHALL COORDINATE WORK BETWEEN ALL TRADES AND WORKMEN TO CLOSE, PATCH, AND REPAIR ALL HOLES WHERE ITEMS ARE REMOVED AND OPENINGS ARE REQUIRED AS NECESSARY FOR NEW WORK.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (CURRENT EDITION THAT THE AHJ HAS ADAPTED) AND ALL APPLICABLE STATE, COUNTY, AND LOCAL CODES APPLYING TO THE PROPOSED CONSTRUCTION. IN THE EVENT OF CONFLICT BETWEEN THE ABOVE AND THESE PLANS AND SPECIFICATIONS, THE MOST RESTRICTIVE SHALL GOVERN.
- CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO SERVICE BY THE UTILITIES AND SHALL INCLUDE THE COST OF ALL WORK BY OR FOR THEM IN HIS BID. CONTRACTOR SHALL COORDINATE AND CONFORM TO ALL THE UTILITY REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM, EXCEPT THAT THE PROVISIONS FOR OWNER-SUPPLIED EQUIPMENT SHALL ONLY BE COMPLETED TO THE POINT INDICATED ELSEWHERE ON THE DRAWINGS. CONTRACTOR TO MAKE FINAL CONNECTION TO ALL OWNER SUPPLIED EQUIPMENT.
- CONDUIT IS SHOWN DIAGRAMMATICALLY ONLY. EXACT ROUTING OF ALL CONDUITS WITHIN THE BUILDING SHALL BE DETERMINED BY THE CONTRACTOR. ANY COST REQUIRED TO ROUTE CONDUITS DIFFERENTLY THAN IS SHOWN ON THESE DRAWINGS SHALL BE INCURRED BY THE ELECTRICAL CONTRACTOR.
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE NEW, IN THEIR ORIGINAL UNBROKEN PACKAGES BEARING APPROVAL BY UL, NEMA, OR OTHER APPROPRIATE AGENCY, AND INSTALLED PER THEIR GUIDELINES, PER PROPER DUST CONTROL.
- CONTRACTOR SHALL PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM MEETING THE INTENT OF THESE PLANS AND SPECIFICATIONS. ALL SYSTEMS SHALL BE IN BEFORE INSPECTION.
- CONTRACTOR SHALL MAINTAIN GROUND CONTINUITY TO EVERY OUTLET PER N.E.C., TABLE 250-122. PROVIDE A GREEN CONDUCTOR (NOT INDICATED) IN EACH RACEWAY. SIZE OF GROUNDING CONDUCTOR PER NEC ART 250.
- ALL WIRES AND CABLES SHALL BE COPPER, 800 VOLT, #12 AWG MINIMUM, EXCEPT CONTROL WIRING WHICH SHALL BE #18 THINW. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTOR #8 AWG AND LARGER SHALL BE STRANDED. TYPE OF INSULATION AS NOTED ON DRAWINGS AND AS FOLLOWS:
 - THHN/THWN INSULATION FOR ALL BRANCH CIRCUIT WIRING & CONTROL CIRCUIT WIRING.
 - XHHN USED FOR ALL PANEL FEEDERS AND SERVICE CONDUCTORS.
 - THHN/THWN INSULATION TYPE SHALL BE USED WHERE CONDUCTORS ARE INSTALLED IN CONDUITS EXPOSED TO THE WEATHER.
- CONTRACTOR IS RESPONSIBLE FOR ALL CORING, CUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHENEVER IT IS NECESSARY TO PENETRATE. ALL OPENINGS MADE SHALL BE SEALED TO MEET THE FIRE RATING AND STRUCTURAL INTEGRITY OF THE PARTICULAR WALL, FLOOR, OR CEILING.
- ALL ELECTRICAL FIXTURES AND EQUIPMENT SHALL BE GROUNDED. SIZE GND WIRE PER NEC 250
- ELECTRICAL CONTRACTOR SHALL FURNISH TEMPORARY CONSTRUCTION POWER WHERE REQUIRED.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL CONNECTIONS POINTS FOR MECHANICAL, PLUMBING EQUIPMENT AND THERMOSTATS.
- ALL PAINTING OF LIGHT FIXTURES, WHERE SPECIFIED, SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER WITH ALL SURFACES EVENLY COVERED AND NO SAGS, DRIPS, OR SCRATCHES. DO NOT PAINT LENSES, BATTLES, REFLECTORS, OR CHROME PARTS. DISASSEMBLE FIXTURES PRIOR TO PAINTING OF THE FIXTURE AND CLEAN PORTIONS TO BE PAINTED. PAINT SHALL BE SEMI GLOSS ENAMEL. ALL PAINTING COLORS SHALL BE APPROVED BY ARCHITECT.
- ALL PANELS, SWITCHES, ETC., SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE WITH UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS ENTERING THE BOX.
- CONTRACTOR TO COORDINATE LOCATION OF WALL OUTLET BOXES FOR SWITCHES, HORNS, FIRE ALARM PULL STATIONS, RECEPTACLES, ETC. WITH SHELVES, STACKS AND FURNITURE LOCATIONS. ADJUST AS REQUIRED.
- WHERE ELECTRIC WATER HEATERS ARE INSTALLED, PROVIDE A DISCONNECT SWITCH IN AN ACCESSIBLE LOCATION.
- FURNISH AN APPROVED EXPANSION FITTING WHERE RACEWAY CROSSES AN EXPANSION JOINT.
- PROVIDE PULL BOXES IN LONG RUNS (GREATER THAN 100') OR AS REQUIRED TO EASE THE TENSION ON WIRE DURING PULLING OF CONDUCTORS.
- PROVIDE PULL WIRE IN EMPTY CONDUITS INSTALLED AND CAP OFF.
- SEE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS, CONTROL TRANSFORMERS, TIME CLOCKS, VALVES, T-STAT RELAYS AND DUCT SMOKE DETECTORS.
- ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE EXPOSED TO THE OUTSIDE ENVIRONMENT SHALL BE WEATHERPROOF TYPE, NEMA 3R.
- WHERE MORE THAN ONE LIGHT SWITCH OCCURS AT THE SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE.
- DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS OR OTHERWISE DIRECTLY ON THE EQUIPMENT, PROVIDED THAT NO MODIFICATION SHALL OCCUR ON THE EQUIPMENT AND THAT THE UL LISTING FOR THE EQUIPMENT IS NOT COMPROMISED.
- ALL ELECTRICAL POWER, LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED AREAS ARE TO BE INSTALLED IN METALLIC CONDUITS. ALL WALL PENETRATIONS SHALL BE PROVIDED WITH A FIRE RESISTANT SEALANT.
- CONTRACTOR TO PAY PERMIT AND ALL APPLICABLE FEES RELATIVE TO THE CONSTRUCTION OF THIS PROJECT.
- ALL UNDERGROUND CONDUITS SHALL BE PVC OR PVC RGS. IN A TRANSITIONAL RISER, ALL PARTS OF THE CONDUIT SYSTEM THAT IS BELOW GRADE SHALL BE PVC OR PVC COATED RGS UP TO 6" ABOVE GRADE.
- FOR SPLIT SYSTEM AIR CONDITIONING UNITS, PROVIDE A PORCELAIN LAMP RECEPTACLE, A SWITCH AND A RECEPTACLE FOR FAN COIL UNIT. CONNECT TO NEAREST RECEPTACLE.

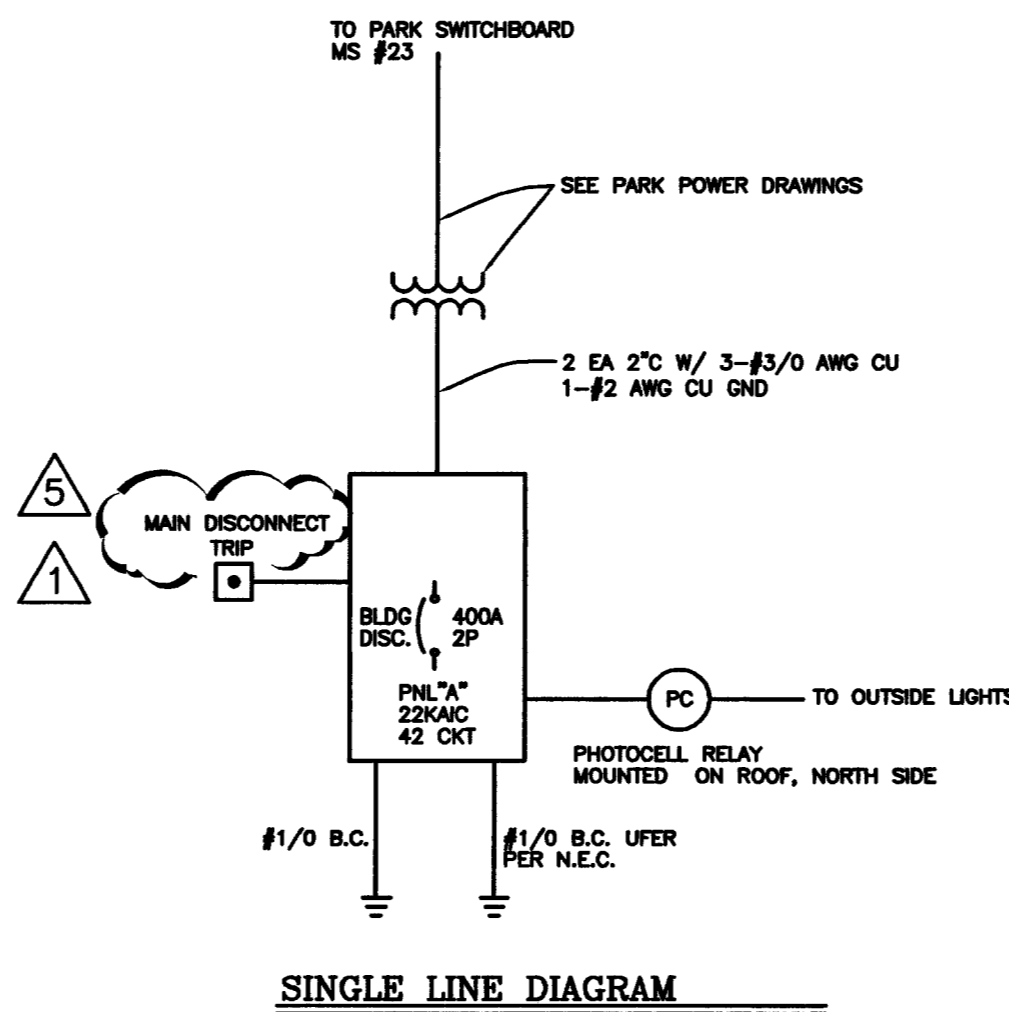
ELECTRICAL SYMBOLS

PLANS SYMBOLS



LIGHTING FIXTURE SCHEDULE

LETTER	SYMBOL	DESCRIPTION	MANUFACTURER CATALOG NUMBER	VOLT	LAMP	MOUNTING	COMMENTS
A	☐	2'X4' FLUORESCENT	LITHONIA LB 3 32 OR EQUAL	120V	(3) 32W TB	SURFACE	2
B	☐	STRIP FLUORESCENT	LITHONIA VMC-1-123-120 OR EQUAL PER RFP#13	120V	(1) 32W TB	SEE STRUCT DETAIL	2
C	☐	WALL PACK	LITHONIA TWH150M120 OR EQUAL	120V	150W MH	WALL	MECH. RM 2
D	☐	HPS WALL PACK	LITHONIA TWAC-42TRT-120 PE-DNA-LPI OR EQUAL	120V	400W HPS	WALL	2
F							



CITY OF LAS VEGAS, GENERIC CONCESSION BUILDING

COMMERCIAL BUILDING ELECTRICAL LOAD CALCULATION: 580 SQ-FT, TOILETS 137 SQ-FT, KITCHEN

Retrieve File Name: COMBLDLOAD.XLS

NATIONAL ELECTRICAL CODE ARTICLE	ELECTRICAL AREA OR ITEM	UNITS OF MEASURE	QUANTITY AT	VOLT-AMPERES OR VOLT-AMPERES PER UNIT	MULTIPLIER	TOTAL VOLT-AMPERES SINGLE-PHASE 120/240V
220-30)	GENERAL LIGHTING: TOILETS	SQ-FT	580	3	125%	2,175
220-30)	KITCHEN	SQ-FT	272	3	125%	1,020
	MAINTENANCE	EACH	3	200	125%	750
	SITE LIGHTING: PERIMETER	EACH	10	150	125%	1,875
220-30)	RECEPTACLE LOAD: 20-AMPERE DUPLEX RECEPTACLES	SQ-FT	989	1	100%	989
						989
						0
						247
						1,236
	HVAC: EVAPORATIVE COOLER	EACH	1	1,200	100%	1,200
	FIXED EQUIPMENT: REFRIGERATOR	EACH	1	1,500	100%	1,500
	FREEZER CASE	EACH	1	1,000	100%	1,000
	WATER HEATER	EACH	2	4,500	100%	9,000
	MICROWAVE	EACH	1	1,500	100%	1,500
	ICE MACHINE	EACH	1	1,000	100%	1,000
	FOUNTAIN HEAD	EACH	1	750	100%	750
	MECHANICAL/PLUMBING SYSTEMS AND MOTORS: IRRIGATION CONTROLLER	EACH	1	1,800	100%	1,800
	LARGEST MOTOR: EVAPORATIVE COOLER	EACH	1	1,200	25%	300
	SIGNAGE: MARQUEE	EACH	1	1,200	100%	1,200
	TOTAL VOLT-AMPERES:				TOTAL:	26,306
	TOTAL LOAD CURRENT: AT 240-VOLTS AC, 1-PHASE, IN AMPS:				TOTAL MAXIMUM LOAD CURRENT:	110
	MINIMUM SERVICE SIZE, IN AMPERES:					110
	RECOMMENDED SERVICE SIZE:					200

THE DESIGN PROFESSIONAL HAS PERFORMED ALL THE REQUIRED VOLTAGE DROP CALCULATIONS FOR ALL BRANCH CIRCUITS AND FEEDERS PER 1999 NATIONAL ELECTRICAL CODE ARTICLE 210-19(a) FPN No. 4.

THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS INDICATED FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM. 1999 NATIONAL ELECTRICAL CODE

DRAWING INDEX

SHEET NUMBER:	SHEET NAME:
EN1	ELECTRICAL NOTES, SYMBOLS, SCHEDULE & DRAWING INDEX
E1	ELECTRICAL LIGHTING & POWER PLAN W/ PANEL



REVISORS

7/25/08	AS BUILT CONDITIONS
9/12/08	CLV COMMENTS
9/16/08	CLV COMMENTS

CONSULTANT

DEC INC.
 2800 S. RANCHO RD.
 LAS VEGAS, NEVADA 89108
 (702) 871-5104
 JOB#: 080116

BONANZA-SANDHILL PARK
 Concession Building
ELECTRICAL
 NOTES, SYMBOLS, SCHEDULE, INDEX

OWNER: CITY OF LAS VEGAS
 DEPARTMENT OF PUBLIC WORKS
 ARCHITECTURAL SERVICES

400 EAST STEWART AVENUE
 LAS VEGAS, NEVADA 89101
 PHONE: (702) 229-8535
 FAX: (702) 582-5228
 TDD: (702) 366-1108

DRAWN: BT
 FILE:
 DATE: 8/26/08
 SCALE: 1/4" = 1'-0"
 BID NO: 02.1534107
 CLV ORG: 05069

61
 RCB-EN1